



Biosecurity in a Biosafety Environment

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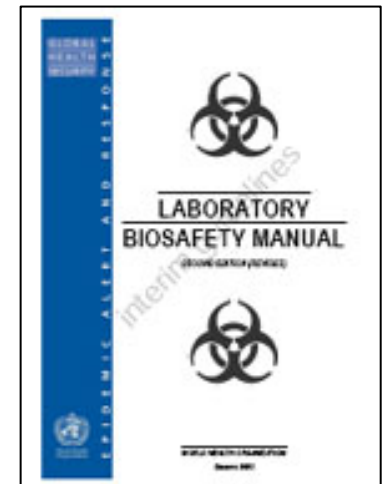
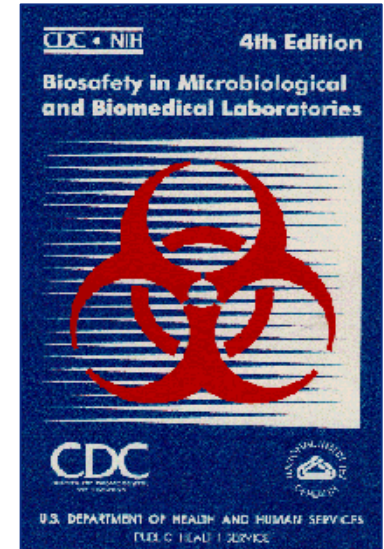
Sandia National Laboratories

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Biosafety and Biosecurity

- **Biosafety**
 - Objective: reduce or eliminate accidental exposure to or release of potentially hazardous agents
- **Biosecurity**
 - Objective: protect biological agents against theft and sabotage by those who intend to pursue bioterrorism or biological weapons proliferation
- **Common strategy**
 - Implement graded levels of protection based on a risk management methodology
- **Control of certain biological materials is necessary, but *how* that is achieved must be carefully considered**
 - Biosecurity and biosafety should be integrated systems, and refrain from compromising necessary infectious disease research





Biosafety and Biosecurity Issues

Areas of Overlap

- Risk assessment and risk management
- Personnel management
- Material transport protocols
- Physical security elements
- Training
- Emergency planning
- Program management

Possible Conflicts

- Access controls
 - Allow for emergency ingress and egress but still ensure security of materials
- Badges
 - In some situations, badges can be a safety hazard but proper identification signifying authorization is crucial for both biosafety and biosecurity
- Signage
 - Necessary to alert staff and visitors of hazards but may identify materials, locations, and people

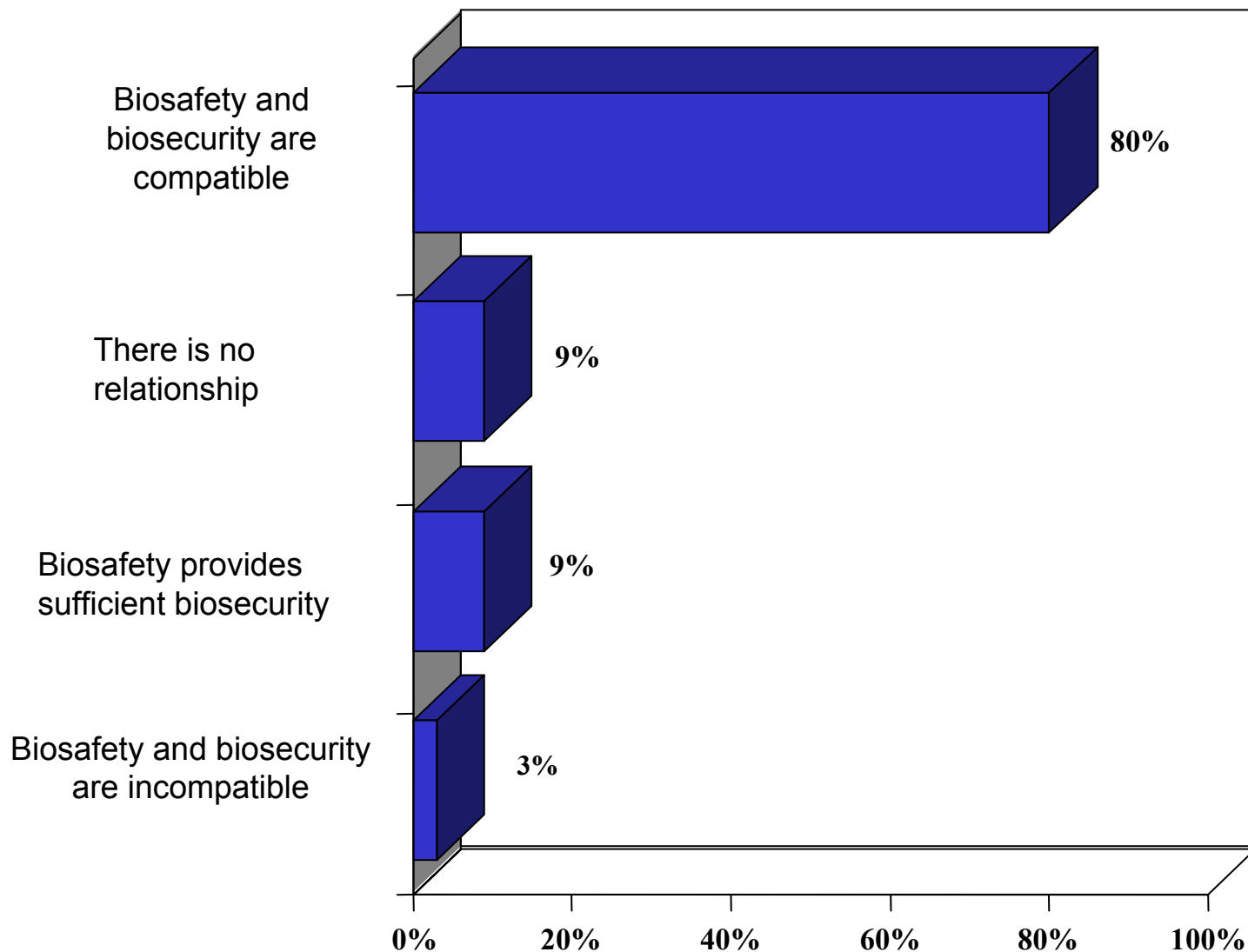


Survey of Bioscience Community

- **Reed Research Group conducted the survey**
 - Email blasts directed respondents to a secure web server
- **203 respondents**
 - Universities (36%), Industry (24%), Clinical labs (15%), Government (14%), Diagnostic labs (3%) and Other (8%)
 - 77 responding institutions (38 %) work with Select Agents (regulated by 42 CFR 73, 9 CFR 121, and/or 7 CFR 331)
 - Director/manager (34%), Principal Investigator (27%), Laboratory support staff - technician (16%), Biosafety officer (6%), Responsible official (2%) and Other (15%)

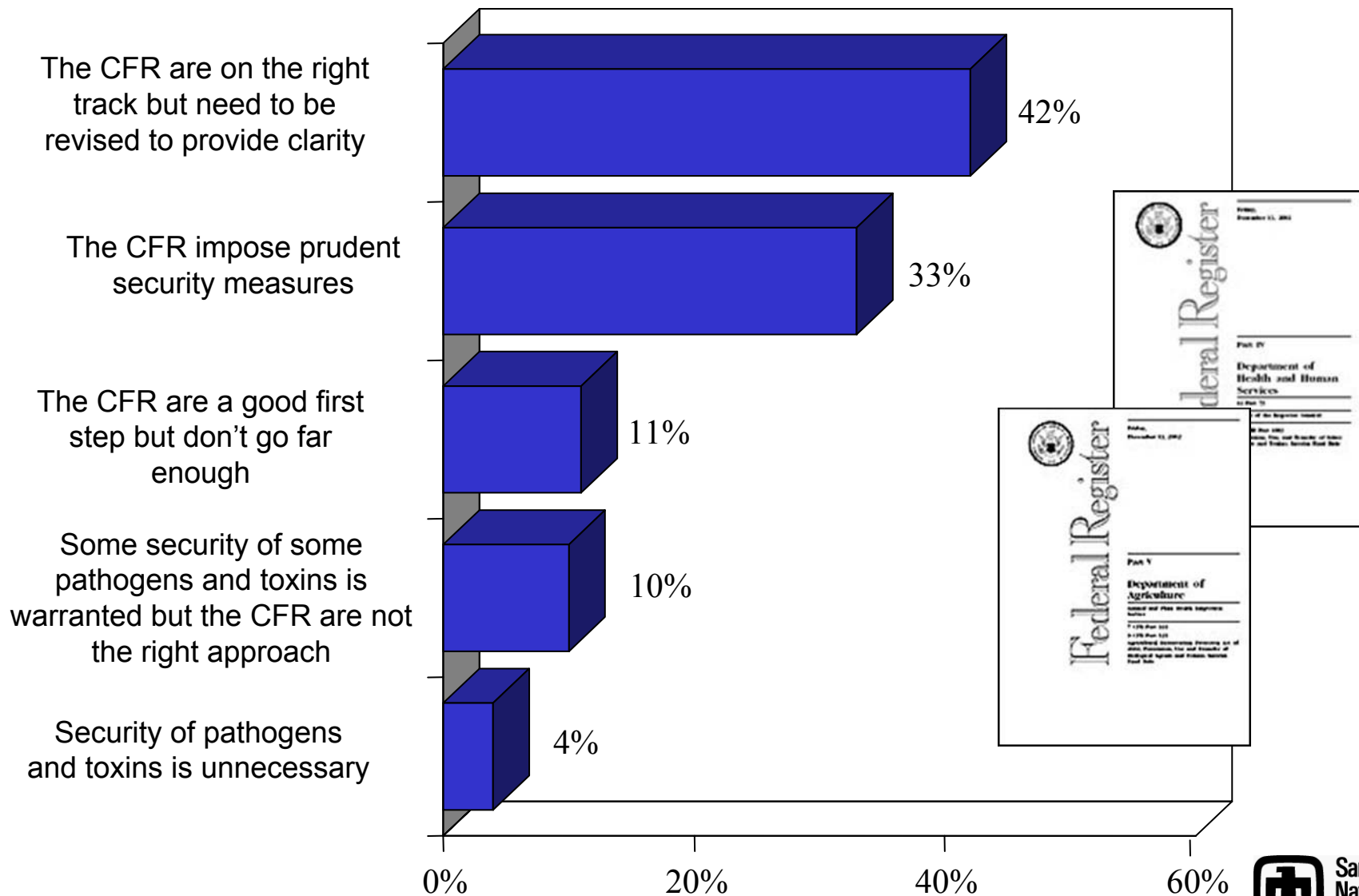


Relationship of Biosafety and Biosecurity: All Respondents





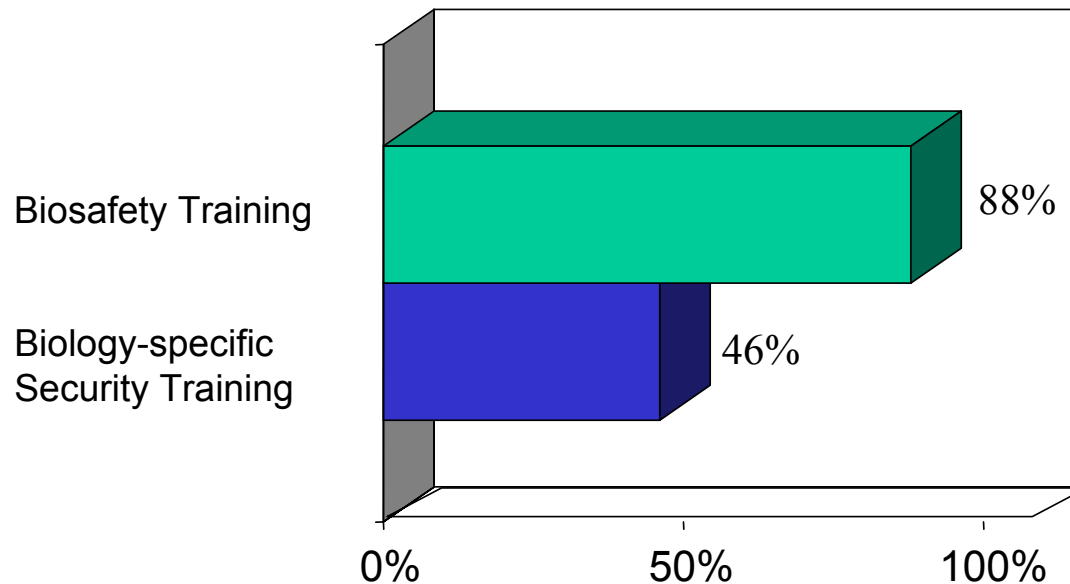
Views on Security of Biological Materials: All Respondents





Biosafety and Biosecurity Training: All Respondents

- **Does your facility conduct:**
 - Biosafety training and biology-specific security training



- Of those facilities that provide such biosecurity training, 84% do so in conjunction with their biosafety training.



Perceived Impacts of CFR Security Requirements: Select Agent Respondents

- **Positive Impacts**

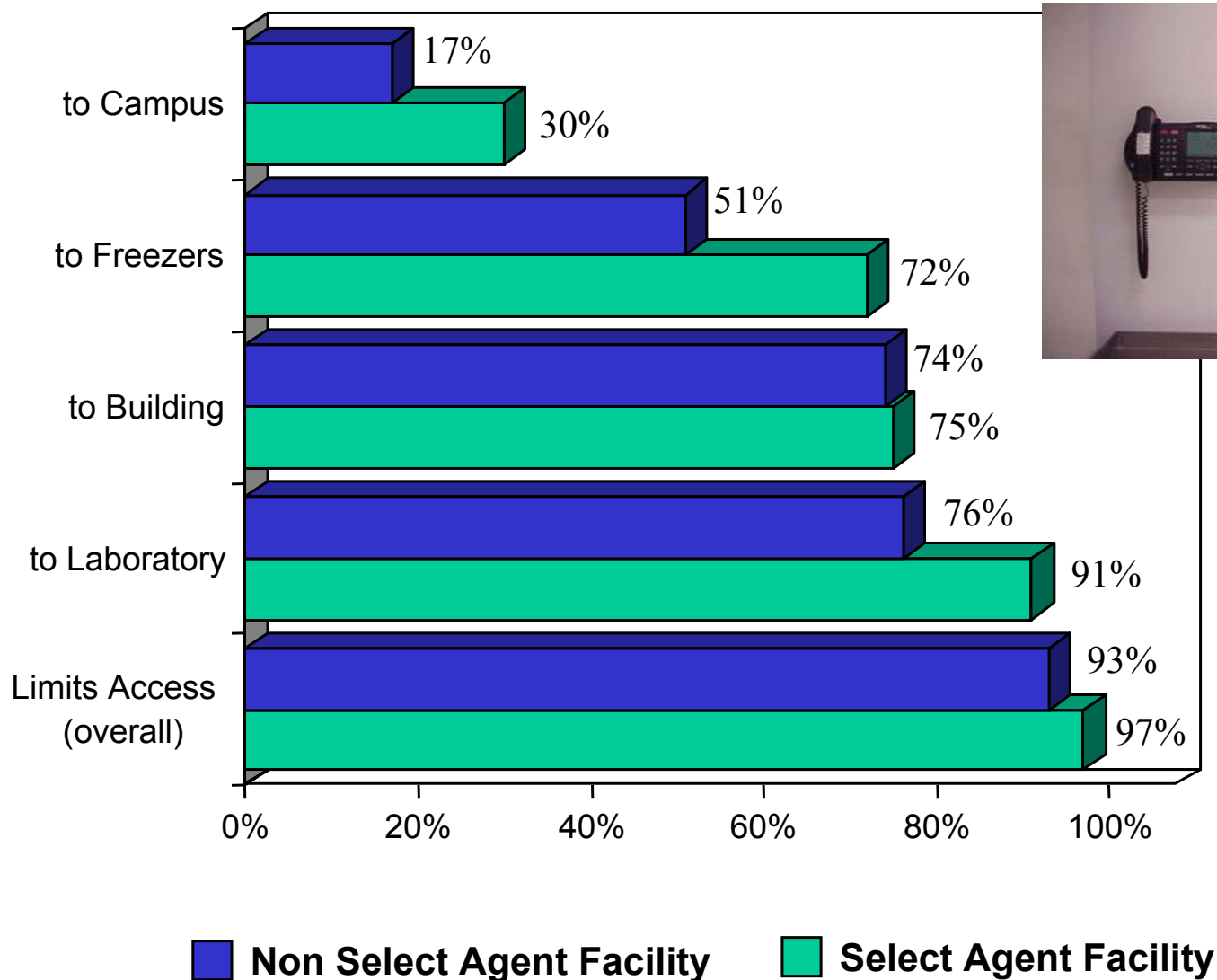
- Increased awareness of risks posed by some pathogens and toxins – 85%
- Increased funding for biosafety and biosecurity staff – 33%
- Increased funding from the institution for needed security – 30%
- Increased research funding – 27%
- Increased number of researchers – 18%
- No positive impacts – 3%

- **Negative Impacts**

- Time required to comply with regulations – 62%
- Inconvenience of increased security – 39%
- Required to use research funding for required security upgrades – 35%
- Decrease in research funding – 14%
- Decrease in number of qualified research personnel – 12%
- No negative impacts – 11%
- Other – 6%

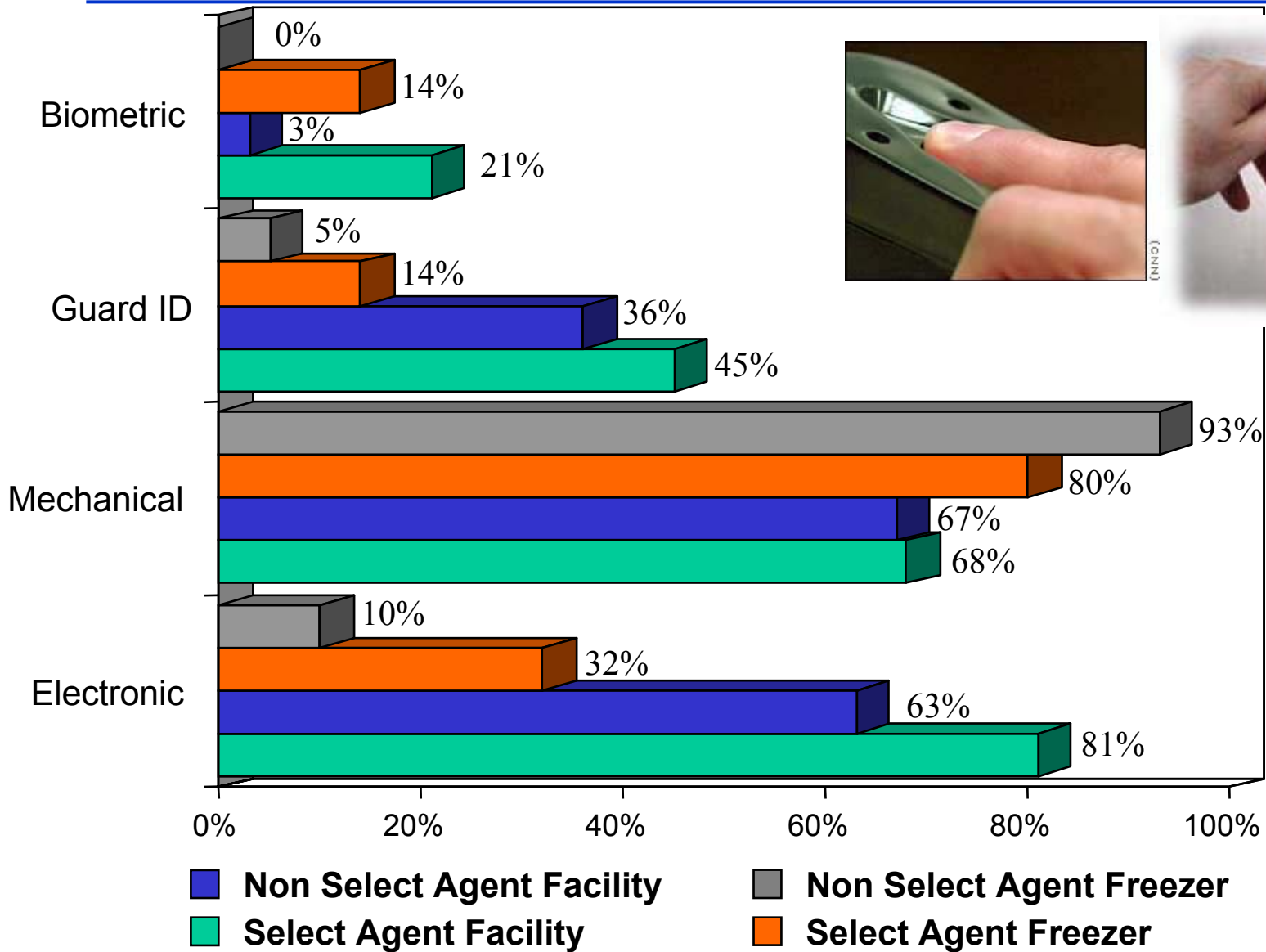


Access is a Safety and Security Issue





Access Controls





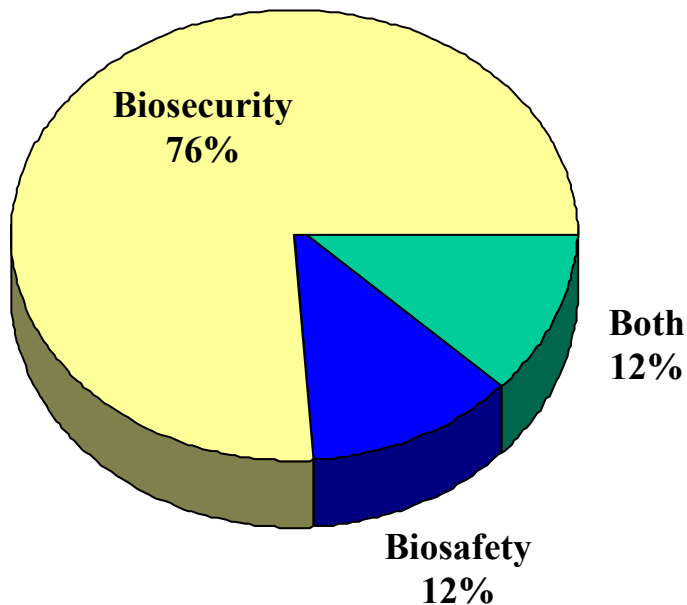
Visitor Escorting is a Safety and Security Issue

- **Select Agent Facilities**

- Require escort:

- 79% Yes
 - 21% No

- Reason:

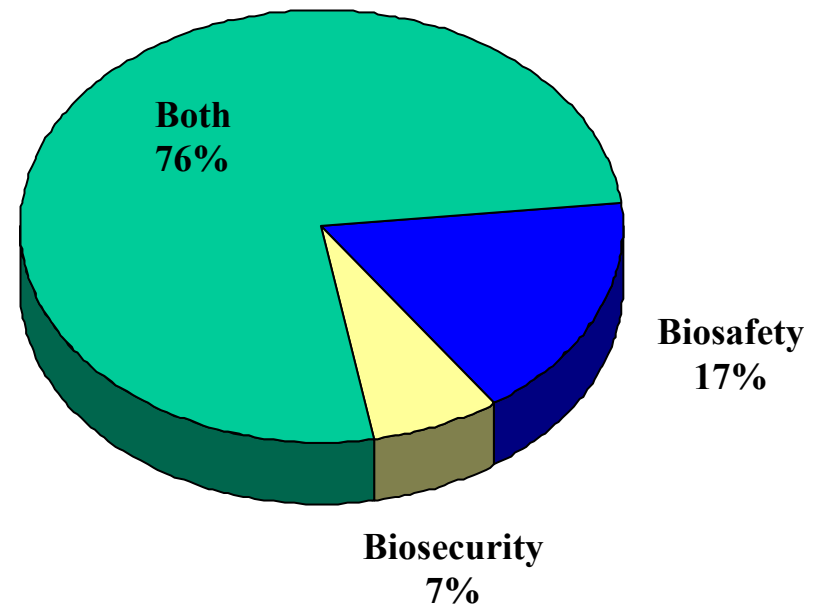


- **Non Select Agent Facilities**

- Require escort:

- 60% Yes
 - 40% No

- Reason:





Inventory is a Safety and Security Issue

- **Select Agent Labs**

- 90% inventory all pathogens and toxins
- 48% inventory select agents differently than non-select agents

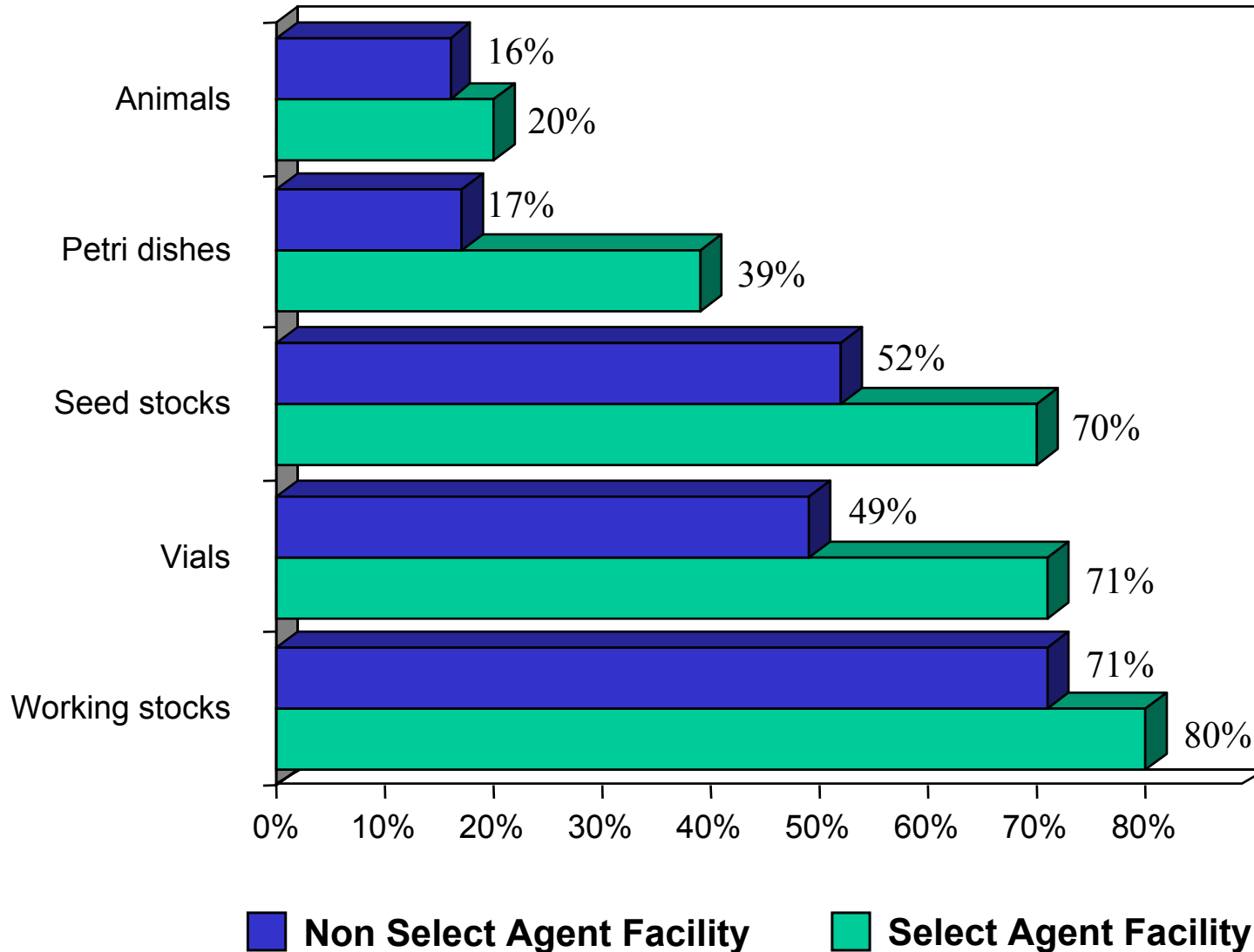
- **Non Select Agent Labs**

- 65% inventory all pathogens and toxins





Inventory is a Safety and Security Issue





Summary

- **96% of respondents feel that biosecurity is warranted for some pathogens and toxins**
- **Scientific community (80%) feels that biosafety and biosecurity are compatible.**
- **86 % of respondents were generally positive about the CFR**
 - But half of those think the CFR should be revised to provide clarity



Contact Information

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